

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 47

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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U.S. PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MICHAEL Z. LOWENSTEIN

Appeal No. 2003-0788
Application No. 08/422,360

ON BRIEF

Before KRASS, FLEMING, and BLANKENSHIP, Administrative Patent Judges.

BLANKENSHIP, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 22, 26, 29, and 39.

We affirm.

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BACKGROUND

The invention is directed to a device for improving the power factor of a nonlinear load by optimizing the current drawn by the load.

The instant application has earlier been before this panel of the Board. In an earlier appeal (Appeal No. 1997-1187), we affirmed-in-part the examiner's rejections under 35 U.S.C. § 103, and, in accordance with 37 CFR § 1.196(b) (1997), entered a new ground of rejection under 35 U.S.C. § 103. (Paper No. 23; mailed Jul. 25, 2000, remailed Sep. 15, 2000.)

Instant claim 22 is reproduced below.

22. In a multiple phase electrical system for supplying power from an AC source to one or more nonlinear loads connected to at least one phase line therein, a device for substantially eliminating currents in a neutral wire, said device comprising:

a first completely-passive parallel resonant circuit having three passive electrical branches connected and parallel;

said first completely-passive parallel resonant circuit is tuned to a third harmonic frequency of a fundamental frequency of said AC source; and

said three passive electrical branches comprise a first branch consisting of a capacitor, a second branch consisting of a reactor, and a third branch consisting of a resistor.

The examiner relies on the following evidence:

Stacey et al. (Stacey) 3,849,677 Nov. 19, 1974

Thanawala 3,881,137 Apr. 29, 1975

Appellant's Admitted Prior Art (APA).

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Claims 22, 26, 29, and 39 stand rejected under the doctrine of res judicata, in view of the earlier Board decision.

Claims 22, 26, 29, and 39 stand rejected under 35 U.S.C. § 103 as being unpatentable over APA, Stacey, and Tanawala.

Claims 33-35, 37, and 38 have been allowed.

Claims 1-21, 23-25, 27, 28, 30-32, 36, 40, and 41 have been canceled.

We refer to the Final Rejection (Paper No. 34) and the Examiner's Answer (Paper No. 43) for a statement of the examiner's position and to the Brief (Paper No. 42) and the Reply Brief (Paper No. 44) for appellant's position with respect to the claims which stand rejected.

OPINION

Res judicata

We will not sustain the rejection based on the doctrine of res judicata. Even if the claims were identical in language to those in the earlier appeal (they are not), the record before the examiner, and for our review, is different from that of the earlier appeal. Declarations are now in evidence and relied upon by appellant. Patentability is determined on the totality of the record, after evidence or argument is submitted by the applicant in response. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Res judicata does not apply. See In re Russell, 439 F.2d 1228, 1230,

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169 USPQ 426, 428 (CCPA 1971); In re Herr, 377 F.2d 610, 611, 153 USPQ 548, 549 (CCPA 1967).

Section 103

Appellant submits (Brief at 5 and 19) that instant claim 39 should be separately considered. We select claims 22 and 39 as representative. See 37 CFR § 1.192(c)(7) (1997); 37 CFR § 41.37(c)(1)(vii) (effective September 13, 2004, 69 Fed. Reg. 49960 (August 12, 2004), 1286 Off. Gaz. Pat. Office 21 (September 7, 2004)).

We have considered appellant's arguments set forth at pages 6 through 10 of the Brief in response to the Section 103 rejection. However, our position remains unchanged from that set out in our earlier decision. We reproduce below a pertinent portion of our earlier opinion.

A suggestion to combine references may come expressly from the references themselves. A suggestion may also come from the nature of a problem to be solved, leading inventors to look to references relating to possible solutions to that problem. Pro-Mold and Tool Co. v. Great Lakes Plastics Inc., 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996). In the instant case, the problem to be solved was the detrimental effect of third order harmonic currents created in electrical power systems having single phase nonlinear loads.

In electrical power systems, harmonic currents are often created due to the presence of nonlinear loads located therein. In some instances, significant levels of third order harmonic currents are created in electrical power systems having single phase nonlinear loads, which may often approach the level of the fundamental frequency current. Such third order harmonic currents adversely effect [sic] the performance of power systems by causing the peak voltage of the power lines to flatten, thus disrupting the

operation of nonlinear loads, such as single-phase switching power supplies, and corresponding devices connected thereto.

(Specification, page 1, lines 11-18.)

We would agree with appellant that the references of Stacey and Thanawala, standing alone, would not have suggested appellant's invention to the artisan. However, in view of the problem that appellant set out to solve, we find that the artisan, when seeking solutions, would reasonably have turned to references dealing with problems related to harmonic currents. The artisan would have found the Stacey reference to be of particular pertinence to the problem at hand. Stacey discloses, in Figure 5, a filter connected in series between a power source and a load, forming an infinite impedance to the flow of harmonic currents. The filter consists of a capacitor 60, an inductor 62, and an active element 28' which generates a "fictitious ripple" current at harmonic frequencies to counteract the harmonics in the circuit. See Stacey, column 6, line 56 through column 7, line 10. "[I]f the elements 60 and 62 are exactly tuned to the ripple frequency, and assuming that only one ripple frequency [exists], then if the internal resistance of the passive elements is zero, the active element 28' will not come into play...." Id.

Thus, the reference explicitly discloses that an active element is unnecessary when there is but one harmonic frequency of interest. The examiner finds that replacement of the active element with a resistor would have been indicated for precise tuning of the filter for a single harmonic frequency[,] a fact which appellant has not disputed. Appellant instead attacks the combination of Stacey and Thanawala as if they were the sole evidence of unpatentability, which is not responsive to the rejection. The evidence submitted by the examiner includes appellant's APA. The combination of prior art including the APA has not been sufficiently addressed by appellant.

Appellant also appears to mischaracterize the rejection.... [T]he examiner's rationale does not propose modifying the circuitry of Stacey, in view of the teachings of Thanawala, beyond the replacement of active element 28' with a resistor. Moreover, in addition to the specific applications shown in Figs. 9, 11, 13, and 15 of Thanawala, the reference suggests resistance for damping of harmonic frequencies. See, e.g., Thanawala, column 1, lines 15 through 35.

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We agree with appellant that Stacey teaches that active filtering is desirable. But that teaching is directed to the problem that the reference was solving -- namely, the problem of detrimental effects of multiple harmonic frequencies. "The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain." In re Heck, 699 F.2d 1331, 1333, 216 USPQ 1038, 1039 (Fed. Cir. 1983), quoting In re Lemelson, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968). In view of Figure 5 of Stacey and the above-noted portion of the written description of the reference, in addition to the disclosure in column 1 that harmonic filtering traditionally consisted of passive components, the artisan -- when faced with the problem of attenuating a single harmonic frequency -- would have found Stacey to be suggestive of using only passive components.

We are also aware...that Stacey discloses refinements to overcome variations in passive component values or source frequency. However, in much the same way as the specific teachings regarding overcoming the effects of multiple harmonic frequencies would have been viewed by the artisan as having marginal relevance to the problem at hand, the teaching is also of little relevance to the problem that was facing appellant.

We disagree with appellant's statement, at the bottom of page 9 of the Brief, that Stacey fails to teach that an active element is not necessary when there is but one harmonic frequency. Appellant has not provided any evidence in support of the allegation -- nor even submitted any reasoning -- that might convince us of error in our interpretation of the disclosure.

Further, we acknowledge that Stacey refers to a "linear" load 18 at column 3, line 37. However, as we noted at page 9 of our earlier opinion, in view of the remainder of the reference, we consider the use of the word at the one occurrence in Stacey to represent a mere informality. The apparatus of Stacey was invented to overcome the effects of nonlinear loads. See Stacey, column 1, first paragraph.

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Finally, we are unpersuaded that Stacey's teachings fail to "reflect the real world," as argued at pages 9 and 10 of the Brief. Engineering approximations that account for major influences, while discounting those having little effect, does, in our view, accurately reflect the "real world."

Appellant also argues (Brief at 19) that the claim 39 features of the "housing member" and the "means for connecting the nonlinear load to said completely-passive power resonant circuit" are not disclosed or made obvious by "the cited art." However, as we noted in our earlier opinion, housings and electrical connectors were obvious expedients for protection of components and users, and to deliver power to components, respectively. Appellant has provided no evidence, nor even submitted any reasoning, to the contrary.

We conclude that the examiner has set forth a reasonable case for prima facie obviousness of the claimed subject matter for at least representative claims 22 and 39.

We turn to consider the evidence submitted by appellant as tending to show nonobviousness of the invention; i.e., four declarations purported to show "Commercial Success and Acclaim" of the invention.

Initially, we note that appellant filed a Reply Brief, but did not provide a substantive response to the examiner's findings, set forth at pages 20 and 21 of the Answer, relating to the declarations. The examiner considers the evidence of commercial success to be lacking. See In re Huang, 100 F.3d 135, 140, 40 USPQ2d

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1685, 1689 (Fed. Cir. 1996) ("[T]he PTO must rely upon the applicant to provide hard evidence of commercial success.").

Further, we agree with the examiner's conclusion that appellant has not shown that the evidence in support of nonobviousness is relevant to the claims at issue and thus entitled to weight. In particular, it is not clear what "invention" is asserted to be the subject of commercial success and acclaim.

The declaration of the inventor (Lowenstein), which alleges the commercial success, states (¶ 4) that "the INVENTION" being addressed means "the invention" of numerous claims prosecuted in this and a parent application. The numerous claims represent, potentially, numerous different inventions, as opposed to the invention of instant claim 22 and the invention of instant claim 39. The declarations of DeDad,¹ Draus, and Pirrone appear to define the "INVENTION" by repeating the instant claims on appeal. We note that at least instant claim 26, requiring at least three completely passive parallel resonant circuits connected along separate phase lines of a multiple phase electrical system, is not commensurate with the scope of coverage that appellant seeks. "It is well settled 'that objective evidence of non-obviousness must be commensurate in scope with the claims which the evidence is offered to support.'" In re Grasselli, 713 F.2d 731, 743, 218 USPQ 769, 778 (Fed. Cir. 1983) (citing In re Tiffin, 448 F.2d 791, 792, 171 USPQ 294, 294 (CCPA 1971)).

¹ Although the examiner denied entry, ostensibly, of the Dedad declaration after the final rejection, the examiner addressed the declaration in the Answer.

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When a patentee offers objective evidence of nonobviousness, there must be a sufficient relationship between that evidence and the patented invention. See Demaco Corp. v. F. Von Langsdorff Licensing Ltd., 851 F.2d 1387, 1392, 7 USPQ2d 1222, 1226 (Fed. Cir.), cert. denied, 488 U.S. 956 (1988). "The term 'nexus' is used, in this context, to designate a legally and factually sufficient connection between the proven success and the patented invention, such that the objective evidence should be considered in the determination of nonobviousness. The burden of proof as to this connection or nexus resides with the patentee."

Id.

In re Paulsen, 30 F.3d 1475, 1482, 31 USPQ2d 1671, 1676 (Fed. Cir. 1994).

The principle that the burden of showing nexus applies to the party asserting the objective evidence of nonobviousness particularly applies in the case of, as here, ex parte prosecution by an applicant for patent. Appellant cites, at page 18 of the Brief, two civil litigation (validity/infringement) cases for the proposition that when a marketed product embodies the claimed features and is coextensive with them -- neither of which, by the way, have been established in this case -- then burden shifts to "the Examiner" to present evidence to rebut the "presumed nexus." Appellant draws an incorrect inference from the civil litigation cases. Cf. Ex parte Remark, 15 USPQ2d 1498, 1503 (Bd. Pat. App. & Int. 1990), for a discussion with respect to how and why the precedents of our reviewing court have consistently required more than a mere showing that there was commercial success and that the commercially successful article embodied the invention in order to establish the requisite nexus in ex parte cases. See also In re Huang, 100 F.3d at 140, 40 USPQ2d at 1689 ("evidentiary routine of shifting

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burdens in civil proceedings inappropriate in ex parte prosecution proceedings because examiner has no available means for adducing evidence") (citing Ex parte Remark)).

We agree with the examiner's conclusion that appellant has not shown that the evidence in support of nonobviousness is relevant to the claims at issue and thus entitled to weight. In particular, it is not clear what "invention" is asserted to be the subject of commercial success and acclaim. Thus, while we cannot say with certainty that the merits of the invention of claim 22 or claim 39 are not the reason for the alleged commercial success and acclaim, we can say with certainty that appellant has not met his burden in showing a nexus between the claimed invention and the alleged commercial success and acclaim.

We conclude that the overall weight of the objective evidence of nonobviousness does not outweigh the evidence of obviousness relied upon by the examiner. We thus sustain the rejection of claims 22, 26, 29, and 39 under 35 U.S.C. § 103 as being unpatentable over APA, Stacey, and Tanawala.

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CONCLUSION

The rejection of claims 22, 26, 29, and 39 under 35 U.S.C. § 103 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED


ERROL A. KRASS
Administrative Patent Judge

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MICHAEL R. FLEMING
Administrative Patent Judge


HOWARD B. BLANKENSHIP
Administrative Patent Judge

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WEINER & BURT, PC
P. O. BOX 186
HARRISVILLE , MI 48740